Stubbs, Observer United States Weather Bureau, Santo Domingo, reports:

While in the harbor of Monte Christo, Captain Garvin, of the Clyde Line, was told by the captain of the Norwegian bark, *Linnea*, that in running from Bahia, Brazil, for Barbados he got too far west and made St. Lucia. He then beat to the northward and on Sunday, May 11, was within 15 miles of Martinique, which, however, he could not see as it seemed surrounded by a cloud. No ashes were observed on this date. He arrived at Barbados on May 14, and early in the morning of that day 1½ inches of volcanic dust fell on the *Linnea's* deck.

THE VARIATION OF TERRESTRIAL GRAVITY OVER THE OCEAN.

As is well known, the study of the mechanics of the earth's atmosphere has usually been complicated by an effort to take account of the so-called viscosity of the air. In an article in the American Meteorological Journal for 1893, it has been shown that the irregular variations of gravity are of equal importance with viscosity. Meteorologists are therefore interested in every effort to determine the actual force of gravity, and in the MONTHLY WEATHER REVIEW for 1895, we have given the results of the work of the Coast and Geodetic Survey, so far as it relates to the surface of the United States. Up to the present time although the force of gravity has been measured on small islands in the ocean, yet nothing has been known as to its value at the surface of the ocean far from land. On this point our first knowledge is that given by F. R. Helmert, Director of the Royal Geodetic Institution at Berlin. In his annual report for April, 1902, he says:

The measurements of relative gravity on the ocean, as planned by myself, following Mohn's method of comparison of mercurial barometers and boiling point thermometers, has been carried out after thorough preparatory work by Dr. Hecker, along the line Hamburg-Lisbon-Rio Janeiro-Lisbon, with the assistance of the Committee on International Geodesy and the allowance of free passage on the part of the Hamburg-South American Steamship Association in the months July-October, 1901. Although the mean error of observation for a complete series (which consists of many determinations with four barometers and six thermometers during a morning or an afternoon) is much larger than the corresponding error in the case of pendulum observations, namely, about plus or minus 0.028 centimeters per second in the value of the acceleration of gravity, still it was established that on the deep ocean the acceleration of gravity certainly differs only a very few hundredths of a centimeter from that in the shallow sea near the coast, being perhaps 0.032 centimeters smaller. It can therefore no longer be maintained that the large value of g observed on the small oceanic islands extends over the ocean itself, and as little can the reverse be maintained, namely, that the apparent defect of mass, in the space occupied by the sea makes itself felt by a great diminution of g relative to that on land.

In connection with the results of Nansen's polar expedition, in the northern Polar Sea, Hecker's determinations add to the probability of the general truth of the equilibrium theory of the earth's crust, as explained by Pratt. Further details are given in the Sitzungsberichte of the Berlin Academy, February, 1902, as also in the report of the work of the Central Bureau of International Geodesy for 1901. As to the accuracy of the new boiling point thermometer, see the Zeitschrift für Instrumentenkunde, 1901, p. 133.—*C. A.*

A METEOROLOGICAL LIBRARY.

If any observer wishes to acquire a very complete library of about 2,000 volumes and 3,000 pamphlets, mostly on meteorology and magnetism, he will do well to address "Madame R. von Wild, Englisch viertel No. 56, Zurich, Switzerland."

CORRIGENDA.

In the MONTHLY WEATHER REVIEW for June, 1902, page 309, column 1, make lines 11 and 12 read as follows:

$$v\varpi = -\frac{c}{2}\varpi^2 z = 2g\frac{\varpi z}{v} = \varpi u z = -\frac{\varpi^2 w}{2} = \text{constant},$$

by 307 and 308, introducing the value $v^2 = 2gz$.

In line 13, dele "not."

Make lines 15 and 16 read as follows:

492. Case I. $$v\varpi = -\frac{\lambda}{k-c}\frac{c}{2}\varpi^2 z = \text{const.}$$

Case II. $$v\varpi = -\frac{\lambda}{k}cz = \text{const.}$$

In line 20, change "these" to "the."

Make line 21 read "values in equation 490."

In line 22 insert "Case I" after "493" and between lines 22 and 23 insert the following:

Case II. $$\frac{\partial u}{\partial \varpi} + \frac{u}{\varpi} + \frac{\partial w}{\partial z} = +\frac{c}{\varpi^2} - \frac{c}{\varpi^2} + 0 = 0.$$

Page 307, make equation 519 read as follows:

519. $$-\frac{1}{\rho}\frac{\partial p}{\partial x} = -\frac{1}{\rho}\sigma_m\frac{\partial B}{\partial x} = -\frac{1}{\rho}\frac{\sigma_m}{111\ 111}G = -\frac{0.12237G}{\rho}.$$

(G is in meters.)

THE WEATHER OF THE MONTH.

By W. B. STOCKMAN, Forecast Official, in charge of Division of Records and Meteorological Data.

CHARACTERISTICS OF THE WEATHER FOR JULY.

The cloudiness was everywhere above the average (decidedly so in the southern slope region) except in the South Atlantic States, Ohio Valley and Tennessee, lower Lake region, the southern Plateau region, North Dakota, Missouri Valley, and the middle Pacific coast region, in which districts the departures ranged from —0.2 to —0.7. The relative humidity was normal in North Dakota; below, from 3 per cent to 7 per cent, in the South Atlantic and east Gulf States, the Florida Peninsula, and the southern Plateau and north Pacific and middle Pacific regions; elsewhere it was above the normal, in values ranging from 1 per cent to 9 per cent. The precipitation was normal in the middle Pacific coast region; below in the Atlantic and east Gulf States, Florida Peninsula, North Dakota, the middle slope, and southern Plateau regions, with departures ranging from —0.3 inch to —3.00 inches; elsewhere it was above the mean, with values ranging from +0.1 inch to +2.3 inches. The temperature was above the normal, in daily values of from +0.1° to +1.6° in the Middle Atlantic, South Atlantic and east Gulf States, Florida Peninsula, Tennessee and the Ohio Valley, Lake region, upper Mississippi Valley, and the middle Pacific region; elsewhere it was below, decidedly so in New England and the Plateau and middle slope regions, where the daily departures amounted to from —2.1° to —3.7°. Strong winds were infrequent but where they occurred, as a rule, the velocities were unusually high.

PRESSURE.

The distribution of monthly mean pressure is shown graphically on Chart IV and the numerical values are given in Tables I and VI.

The area inclosed within the isobar of 30.00 inches of monthly mean pressure included the Middle Atlantic, South Atlantic, east Gulf, and eastern part of the west Gulf States, the central Mississippi and Ohio valleys and the lower Lake region; also the western parts of Washington and Oregon and northwestern California. The highest monthly mean pressures reported were but slightly above 30.05 inches, and occurred